CLAIMS

What is claimed is:

1. A composition comprising a therapeutically effective concentration of an N-phenylsulfonyl prodrug of a proton pump inhibitor comprising a solubilizing moiety, wherein said composition is an aqueous liquid having a pH of from 3 to 7.3.

2. The composition of claim 1 wherein said solubilizing moiety comprises an acidic functional group or a pharmaceutically acceptable salt thereof.

3. The composition of claim 1 wherein said solubilizing moiety comprises one or more hydroxyl functional groups.

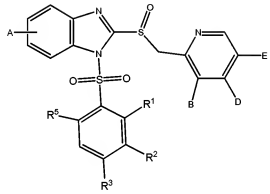
4. The composition of claim 1 wherein said solubilizing moiety comprises a carboxylic acid or a pharmaceutically acceptable salt thereof.

5. The composition of claim 1 wherein the pH is from 5 to 7.

6. The composition of claim 1 wherein the pH is from 5 to 6.

7. The composition of claim 1 wherein the pH is about 5.5.

8. The composition of claim 1 comprising



or a pharmaceutically acceptable salt thereof;

wherein

A is H, OCH_3, or $OCHF_2$;

B is CH_3 or OCH_3;

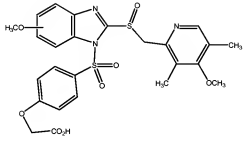
D is OCH_3, OCH_2CF_3, or $O(CH_2)_3OCH_3$;

E is H or CH_3;

R^1, R^2, R^3, and R^5 are independently H, CH_3, CO_2H, CH_2CO_2H, $(CH_2)_2CO_2H$, $CH(CH_3)_2$, $OCH_2C(CH_3)_2CO_2H$, $OCH_2CO_2CH_3$, OCH_2CO_2H, $OCH_2CO_2NH_2$, $OCH_2CONH_2(CH_2)_5CO_2CH_3$, or OCH_3, provided that at least one of R^1, R^2, R^3, and R^5 comprises a carboxylic acid functional group.

9. The composition of claim 8 wherein R^1, R^2, R^3, and R^5 are independently H, CH_3, CO_2H, CH_2CO_2H, $(CH_2)_2CO_2H$, $OCH_2CO_2CH_3$, OCH_2CO_2H, $OCH_2CONH_2(CH_2)_5CO_2CH_3$, or OCH_3.

10. The composition of claim 1 wherein the prodrug has a structure comprising



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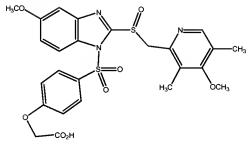
11. The composition of claim 1 wherein the prodrug has a structure comprising



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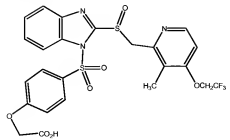
12. The composition of claim 1 wherein the prodrug has a structure comprising



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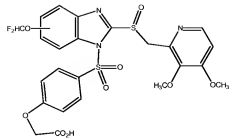
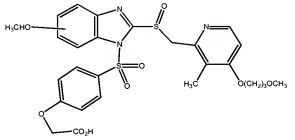
13. The composition of claim 1 wherein the prodrug has a structure comprising



14. The composition of claim 1 wherein the prodrug has a structure comprising



15. A solid composition comprising a prodrug of a proton pump inhibitor comprising a sulfonyl moiety and a carboxylic acid or a pharmaceutically acceptable salt thereof, said solid composition having a pH which is greater than 3 and less than or equal to 7 when dissolved in water at a therapeutically effective concentration for intravenous administration of said prodrug.

16. The composition of claim 15 wherein said proton pump inhibitor is selected from the group consisting of omeprazole, lansoprazole, rabeprazole, pantoprazole, and esomeprazole.

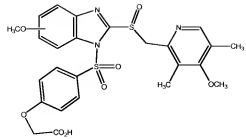
17. The composition of claim 15 wherein said prodrug comprises a phenylsulfonyl moiety.

18. The composition of claim 15 wherein the pH is greater than 3 and less than or equal to 6.

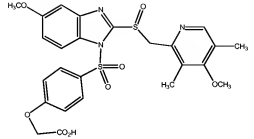
19. The composition of claim 15 wherein the pH is from 6 to 7.

20. The composition of claim 15 wherein the pH is about 6.

21. The composition of claim 20 wherein the prodrug has a structure comprising



22. The composition of claim 20 wherein the prodrug has a structure comprising



23. A method of delivering a proton pump inhibitor to a mammal comprising

a. dissolving in an aqueous solution a therapeutically effective amount of a proton pump inhibitor which is coupled to an ionic functional group or a conjugate acid or base thereof via a sulfonamide linkage; and

b. administering said aqueous solution parenterally to said mammal;

wherein said aqueous solution has a pH which is greater than or equal to 3 and less than 7.

24. The method of claim 23 wherein said ionic functional group or said conjugate acid or base thereof comprises a carboxylic acid or a pharmaceutically acceptable salt thereof.

25. The method of claim 23 wherein said sulfonamide linkage relates to a phenylsulfonamide.

26. The method of claim 23 wherein said proton pump inhibitor comprises omeprazole.

27. The method of claim 23 wherein said proton pump inhibitor comprises lansoprazole.

28. The method of claim 23 wherein said proton pump inhibitor comprises rabeprazole.

29. The method of claim 23 wherein said proton pump inhibitor comprises pantoprazole.

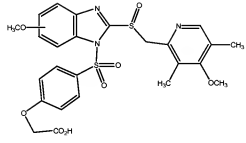
30. The method of claim 23 wherein said proton pump inhibitor comprises esomeprazole.

31. The method of claim 23 wherein the pH is greater than or equal to 4 and less than 7.

32. The method of claim 23 wherein the pH is from 3 to 4.5.

33. The method of claim 23 wherein the pH is greater than or equal to about 5.5 and less than 7.

34. The method of claim 23 wherein the prodrug has a structure comprising



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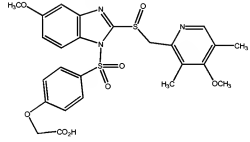
35. The method of claim 23 wherein the prodrug has a structure comprising



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36. A liquid composition comprising a sulfonamide of a proton pump inhibitor and a second therapeutically active agent, said composition having a pH of from 3 to 8.

37. A solid composition comprising a sulfonamide of a proton pump inhibitor and a second therapeutically active agent, said composition having a

pH of from 3 to 8 when said composition is dissolved in water at a concentration that is therapeutically effective for parenteral administration of the sulfonamide of a proton pump inhibitor.